${\bf Appendix}\;{\bf V}$

White Oak River Basin Workshop Summaries



White Oak Workshop Morehead City, North Carolina October 23, 2000

Discussion Question 1: WHAT ARE THE MAIN THREATS TO WATER QUALITY IN THE WHITE OAK RIVER BASIN?

Group 1

- Stormwater runoff
 - ⇒ agricultural runoff (fertilizer, feces, sediment)
 - ⇒ forestry in coastal zone
- Lack of knowledge
 - ⇒ septic tanks in coastal zone
 - ⇒ public official apathy
 - ⇒ sedimentation
 - ⇒ fuel from two-stroke motors
- Port Operations
 - ⇒ turbidity
 - ⇒ construction
 - ⇒ marinas (anti-fauna plant, fuel, septic)
 - ⇒ dredging ... thawing
 - ⇒ pesticides
 - ⇒ ballast water (ships in port)

Group 2

- Agricultural runoff
- Lack of enforcement
- Growth-related issues
 - ⇒ construction/development (stormwater runoff)
 - ⇒ wetlands loss/development
- Storm debris
- Trash/debris
- Public attitude and education
- Oil/fuel from boats
- Lack of pumpout facilities

- Sewage treatment plants
- Increased hardened surfaces and population growth
- Wetland filling



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- Agricultural runoff
 - \Rightarrow (i.e., pesticides)
- Increased recreational boat traffic, marinas
- Marines (Camp Lejeune)
- ? Beaver dams ?
 - ⇒ streamflow impediments
- Sedimentation
- Atmospheric deposition
- Beach nourishment
- Flooding events
- Lack of monitoring/enforcement
- Insecticides
- Dredging

Discussion Question 2: WHAT ARE THE PROBLEM AREAS OR WATERS AND WHAT RECOMMENDATIONS DO YOU HAVE FOR ADDRESSING THESE PROBLEMS/WATERS?

- Waterfront property/subdivisions
- SA waters
- The beach
- Wards Creek Otway
 - ⇒ gets agricultural runoff/sedimentation
 - ⇒ recreation proper permitting (developing near ORW)
- Taylors Creek Beaufort
 - ⇒ NPDES permit
 - \Rightarrow sewers, ponies and boats
- Spooners Creek Morehead City
 - ⇒ stormwater runoff at marina and adjacent areas
 - ⇒ recreation buffers, grassy swales
- Bogue Banks
 - ⇒ impervious surfaces contributing to runoff
 - ⇒ recreation vegetative buffers
 - ⇒ stormwater holding/treatment area
 - ⇒ exposed septic fields



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- ⇒ package plants
- ⇒ recreation enforcement!
- ⇒ proper sizing of tank and maintenance

Group 2

- All along Bogue Sound to Swansboro
 - ⇒ requirements for post-construction buffers/control (new development)
 - ⇒ longer time periods required for monitoring
 - ⇒ requirements for existing construction buffers, runoff control
 - ⇒ reward programs for enticement programs for private homeowners (education)
- Any waterfront property
 - ⇒ see above recommendations
- Any areas adjacent to recreational or commercial fishing
 - ⇒ work with fishermen to help educate the public
 - ⇒ make fishermen aware of adjacent recreational areas

- Calico Creek
 - ⇒ better management of sewage waste and more on-site treatment
 - ⇒ overflow retention ponds
- Taylors Creek
 - ⇒ better management of sewage waste and more on-site treatment
 - ⇒ overflow retention ponds
- Mouth of White Oak River
 - \Rightarrow sedimentation problems \rightarrow sediment retention ponds
- White Oak River near Maysville
 - ⇒ control of direct discharge
- Crab Point
 - ⇒ sedimentation problems
- Bogue Banks
 - ⇒ improve septic systems
 - ⇒ better maintenance and monitoring of package treatment plants
- Morehead City Port
 - ⇒ monitor ballast water
 - ⇒ monitor fuel waste from refueling operations



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- Estuarine shoreline hardening is a problem everywhere
 - ⇒ pass laws to have setbacks for hardened structures
 - ⇒ incentives for vegetated buffers

Discussion Question 3: WHAT LOCAL AGENCIES OR ORGANIZATIONS SHOULD BE INVOLVED IN ADDRESSING THE PROBLEMS?

Group 1

- ♦ Federal/state/local government (\$\$)
- ♦ Personal responsibility
- ♦ Civic groups/NPOs
 - Big Sweep and volunteer monitoring groups
- Private company/corporate responsibility
- ♦ Education (inform, stay current, keep pressure on....)

Group 2

- ♦ Local inspectors (municipalities)
 - enforcement of existing laws (>1 acre)
 - ∘ problem → unincorporated areas
- ♦ Creation of new regulations (<1 acre)
 - especially stormwater issues
- ◆ DOT responsible for runoff from their own projects onto neighboring areas (on-site/off-site)
- ♦ Local laboratories/schools
 - outreach with public

- ♦ Individuals
- ♦ Riverkeeper Program
- ♦ Crossroads and Coastal Federation awareness
- ♦ Local government
- ♦ Federal EPA, etc.
- ♦ State



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Discussion Question 1: WHAT ARE THE MAIN THREATS TO WATER QUALITY IN THE WHITE OAK RIVER BASIN?

Group 1

- Stormwater
 - ⇒ small development
 - ⇒ existing stormwater collection systems
 - ⇒ existing development with no stormwater collection system
- Sanitary sewer overflows
 - ⇒ deteriorated/aging collection systems or pump stations
- Failing septic systems
- Wastewater treatment plants with direct discharge
- Build-up of sediment
 - ⇒ prevents flushing
 - ⇒ may require rechannelization of river
- Hog lagoons and agricultural practices
- Limited education and understanding of basin

- TBT Boat Paint
- Increased impervious surfaces
 - ⇒ parking lots and highways
- Stormwater runoff
 - \Rightarrow erosion
 - ⇒ pet waste
 - ⇒ wild animal waste
- Wetland loss
- Sewage
- Hydrological changes
- Garbage/littering
- Lack of policy organization
 - ⇒ state involvement
 - \Rightarrow money \$\$
- Deforestation



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Group 3

- Stormwater runoff from development
- Failing (older and lower) septic systems
- Domestic animals
- Marinas
- Ten slip dock facilities

Discussion Question 2: WHAT ARE THE PROBLEM AREAS OR WATERS AND WHAT RECOMMENDATIONS DO YOU HAVE FOR ADDRESSING THESE PROBLEMS/WATERS?

- Queens Creek
 - ⇒ closed to shellfish/development issues
 - ⇒ want project similar to Bear Creek
 - ⇒ need detailed assessment of water quality
 - ⇒ source tracking of fecals
 - ⇒ develop strategies based on data
- Upper portion of Northeast Creek (north of 24)
 - ⇒ need fecal source assessment
 - ⇒ cooperation between state and county health department to address septic issues
 - ⇒ package plants
- White Oak River
 - ⇒ shellfish closures from fecals
 - ⇒ sediment at mouth of river
 - \Rightarrow study of flow issues
 - ⇒ determine what you want to manage for
- Debris removal
 - ⇒ concerns about the workers
 - ⇒ Is there equipment that can be used, but is currently not allowed?
 - ⇒ Local people should be allowed to manage this rather than just federal government and use necessary equipment.
 - ⇒ Funding may need to come from federal (Corps, NRCS) or state government, but more local control on managing problem.
- Beavers



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- Stormwater
 - ⇒ must begin at local level
 - \Rightarrow issue = Who?
 - ⇒ planning agencies and staff at local level
 - ⇒ assistance for smaller units of government from state
 - ⇒ guidance and communication from state to local governments
 - ⇒ developers need to be very involved in designing solutions and innovations

Group 2

- Upper White Oak River
 - ⇒ storm debris
 - \Rightarrow flooding
 - \Rightarrow closing off flow
 - ★ clean up/need funding
- The sound itself
 - ⇒ King Mackerel consumption advisory
 - ⇒ mercury
 - ⇒ bioaccumulation
 - * closing of fishery when levels get too high
 - * regular monitoring
 - * public education
- Calico Creek
 - ⇒ where Morehead discharges
 - \Rightarrow f/w blow-out ((~176 lbs/day (NH₃) assuming 20 mg/l of discharge)
 - * stringent permit/financial input
- Open Grounds Farm
 - ⇒ nitrogen
 - \Rightarrow loading
 - * keep them on track/honest
 - * encourage planning of buffer zones

- Newport River
 - ⇒ sedimentation/good or bad?
 - ⇒ beavers
 - ⇒ trawl areas



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- Freeman Creek
 - ⇒ work with Camp Lejeune
 - ⇒ CH2M Hill Study
 - ⇒ dredging
- White Oak and tributary blockage
 - ⇒ clean out from hurricanes
 - ⇒ problem with no organized maintenance
- Consistency in:
 - ⇒ enforcement
 - \Rightarrow buffers
 - ⇒ across the board for NP source pollution

Discussion Question 3: WHAT LOCAL AGENCIES OR ORGANIZATIONS SHOULD BE INVOLVED IN ADDRESSING THE PROBLEMS?

- Developers
- Local engineers
- Commercial fisheries
- Farmers
- Silviculture
- Everybody
- Government agencies that control land
- Marine Fisheries
- CAMA
- NOAA
- Soil and Water Conservation District
- Cooperative Extension Service
- Local government officials/elected and staff
- Corps of Engineers
- Water and sewer agencies
- DOT
- Military
- Direct conflict between interests and proposed solutions



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Group 2

- State has obligation to inform the media
 - ⇒ accuracy through education
- Homeowner participation
- Every citizen involved
- Responsibility of construction agency
 - ⇒ accuracy through education
 - ⇒ more enforcement
- Nonprofit organizations
 - ⇒ role in education of public
- Adequate funding from federal government
- Integrated management between federal, state, local governments
- Industry responsibility
 - ⇒ polluters pay
- Environmental education in school
 - ⇒ state program

- Partnership with state and local governments and stakeholders
 - ⇒ may need statute changes
 - ⇒ liaison with environmental education
- Reduction of unfunded state mandates (environmental)
- More involvement from area universities and labs